

**REMARKS**

Upon entry of the above amendments, this application will contain claims 1, 3, 5, 8, 10-18, 20-23, 27, 29-39, and 44 pending and under consideration. (Claim 28 has been withdrawn from consideration.) The application was originally filed with claims 1-47. Claims 19 and 26 were canceled in a Preliminary Amendment. In the present Response, claims 2, 4, 6-7, 9, 24, 25, 40-43 and 45-47 have been canceled.

**I. Restriction Requirements**

In the Official Communication dated July 28, 2005, restriction to one of the following independent and distinct groups of invention was required:

Group	Claims	Description
Group I	1-28, 20-25, 27, 29-39 & 44	Drawn to compounds, 1 <sup>st</sup> recited use and process of making of formula I where $y = 1$ .
Group II	1-18, 20-25, 27, 30-39 & 44	Drawn to compounds, 1 <sup>st</sup> recited use and process of making of formula I where $y = 2$ .
Group III	28	Drawn to complex compositions employing compounds of I or II and additional active ingredients.
Group IV	40-43	Drawn to additional process of making compounds of I-II.
Group V	45-47	Drawn to additional uses for I-II.

In addition for Group III, a single species selection is required, should this Group be elected.

Applicants confirm their election of Group I, claims 1-18, 20-25, 27, 29-39 and 44. Independent claims 1 and 30 have been amended to recite that  $y$  is equal to 1 only. Claims 40-43 and 45-47 have been canceled.

**II. Rejections under 35 U.S.C. 112, Second Paragraph**

1. R8 as "oxo" was rejected. Independent claims 1 and 39 have been amended by deleting reference to the R8 substituent. Withdrawal of this rejection is requested.
2. Claim 9 was rejected for reciting "R" as being hydrogen. Claim 9 has been canceled. Withdrawal of this rejection is requested.
3. Claim 31 was rejected for misspelling "boromo". Claim 31 has been amended to correct the typographical error and to clarify that the reactant is 2-bromobenzaldehyde by removing the R substituent from the aromatic ring. Withdrawal of this rejection is requested.
4. Claim 39 was rejected citing that "formula (4)" is not present in step (e). Claim 39 has been amended by deleting reference to any formula. Consequently in step (e) the

substituent NR10, where R1 can be H or a CBZ or a Boc group can be protected i.e. replacing H with a CBZ; or Boc group or deprotected, i.e., replacing the CBZ or Boc group with H. Withdrawal of this rejection is requested.

Objections were raised for claims 9, 14, and 15 for failing to further limit the subject matter of the previous claim. Claim 9 has been canceled. Claim 14 has been amended to refer to R<sup>2</sup> as H only, which is within the groups listed for R2 in claim 1. Claim 15 has been amended by deleting reference to the term benzyloxy. Withdrawal of these objections are requested.

### III. Rejections under 35 U.S.C. 101

Claims 9, 14, and 15 were rejected for “[containing] subject matter that lacks a utility”. (Office Action, page 6.) As noted immediately above, claim 9 has been canceled and claims 14 and 15 have been amended. It is believed that claims 14 and 15 as amended are patentable. Withdrawal of these rejections is requested.

### IV. Rejections under 35 U.S.C. §112, First Paragraph

Claims 1-18, 20-25, 27, 29-39 and 44 were rejected under 35 U.S.C. 112, first paragraph as follows:

1. It was stated in the Office Action that “[a]ll the claims which embrace any solvate are nonenabled”. (Office Action, page 7.) Independent claim 1, the only claim reciting a solvent of the compound, has been amended by deleting reference to the term solvent. It is believed that the claims are now patentable. Withdrawal of this rejection is requested.

2. It was stated in the Office Action that the “[s]cope of prodrugs appearing in claim 29 is not enabled”. (Office Action, page 7.) Claim 29 has been amended by deleting reference to the term prodrug. Withdrawal of this rejection is requested.

3. It was stated in the Office Action that the specification is not adequately enabled for the scope of piperazines claimed which can have a variety of heterocyclic/heteroaryl groups within substituents in R<sub>1a</sub>, R<sub>1b</sub>, R, and R8. (Office Action, page 8.)

Independent claims 1 and 30 have been amended by deleting reference to the substituents R8 and R, and amending the groups included for the substituents R<sub>1a</sub> and R<sub>1b</sub> deleting reference to heteroaryl substituents as well as a variety of other substituents. In addition, the applicants refer to the specification, on page 28, ¶0815 (US 20050075344), which lists the binding receptor affinities for representative compounds. Further, reference is

made to a publication entitled "Privileged Structure Based Ligands for Melanocortin Receptors-4, 4-Disubstituted Piperidine Derivatives" (Bioorganic and Medicinal Chemistry Letters, 2006, 16, 3843-3846, see the attached IDS and accompanying article.) On page 3845 of this article, Tables 2 and 3 provide a listing of binding affinities for additional examples of compounds, which fall within the scope of the claims as presently amended. Consideration of this additional information is requested. With this consideration and the amendments to the claims, it is believed that the claims are now patentable. Therefore withdrawal of this rejection is requested.

#### V. Rejections under 35 U.S.C. 112, First Paragraph

Claim 44 was rejected for being non-enabling for preventing the onset of obesity. Claim 44 has been amended by deleting reference to the term "preventing". Withdrawal of this rejection is requested.

#### VI. Rejections under 35 USC § 102

Claims 1-6, 8, 12-18, 20, 22, 25, 27 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Dyck (WO '410). Independent claims 1 and 30 have been amended to delete reference to Q equal to monocyclic carbocycle. This corresponds to the "A" substituent for the compounds disclosed in Dyck, (see priority document USSN 60/328295, page 7, Fig. (I) and page 12 Figs Ia and Ib) which list A as a C3-C6 carbocyclic group.)

In light of the amendments to claims 1 and 30 it is believed that these claims are not anticipated nor made non-obvious by Dyck considered singly or in combination with the other references of record. Therefore withdrawal of this rejection is requested.

#### VII. Rejections under 35 USC §103

Claims 10 and 29 were rejected under 35 U.S.C. 103(a) in light of Dyck cited above. As noted above independent claim 1 from which claim 10 depends has been amended and claim 10 has been amended specifically deleting reference to (D)NR<sup>8</sup>COR<sup>8</sup>. It is believed that the amendments overcome the rejection of claim 10.

Claim 29 has been amended by deleting the last entry, i.e., 1,2,3,4-tetrahydro-isquinoline-3-carboxylic acid {1-(4-chloro-benzyl)-2-[4-(1-diethylaminomethyl-

cyclopentyl)-piperazin-1-yl]-2-oxo-ethyl}-amide. It is believed that claim 29 as amended is patentable over Dyck. Therefore withdrawal of these rejections is requested.

#### VIII. Conclusion

In light of the above comments and amendments to the claims, the Applicants respectfully request withdrawal of all rejections and timely reconsideration of this application leading to allowance of all elected claims. In addition, the Examiner is invited to contact the undersigned attorney by telephone if there are any questions about this Response or other issues that may be resolved in that fashion.

Respectfully submitted,

/James B. Myers/  
James B. Myers  
Attorney for Applicants  
Registration No. 42,021  
Phone: 317-276-0755

Eli Lilly and Company  
Patent Division  
P.O. Box 6288  
Indianapolis, Indiana 46206-6288

24 January 2007